

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): A multilayer thin film formed on an Si substrate by epitaxial growth, the multilayer thin film comprising:

 a buffer layer formed on said Si substrate, where said buffer layer includes
 an oxide thin film of zirconium or of a rare earth element on said Si substrate;
 a first perovskite oxide thin film on said oxide thin film; and
 an electrically conductive thin film on said first perovskite oxide thin film,
 a second perovskite oxide thin film formed on said buffer layer, where said second perovskite oxide thin film comprises PbTiO₃ and has a (100) or (001) orientation, and
 a ferroelectric thin film, which is not has a different composition than the second perovskite oxide thin film, that and which is epitaxially grown on said second perovskite oxide thin film.

Claim 2 (Previously Presented): The multilayer thin film of claim 1, wherein said second perovskite oxide thin film has insulating properties.

Claims 3-4 (Canceled)

Claim 5 (Previously Presented): The multilayer thin film of claim 1, wherein said ferroelectric thin film comprises PZT.

Claim 6 (Original): An electron device comprising a multilayer thin film as recited in claim 1.

Claim 7 (Previously Presented): A process for preparing the multilayer thin film of claim 1, comprising:

forming a buffer layer including an oxide thin film of zirconium or of a rare earth element on an Si (100) substrate,

epitaxially growing a perovskite oxide thin film having a (100) or (001) orientation on said buffer layer, and

epitaxially growing a ferroelectric thin film on said perovskite oxide thin film.

Claim 8 (Previously Presented): The multilayer thin film of claim 1, wherein said buffer layer comprises ZrO_2 .

Claim 9 (Previously Presented): The multilayer thin film of claim 1, wherein said buffer layer comprises Y_2O_3 .